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Fall 2005 Grade 5 and 8 MEAP Science
Parent Report Performance Level Descriptors (PLDs)

There are four Performance Levels in science:

(1) Exceeded Michigan Standards
(2) Met Michigan Standards
(3) Basic
(4) Apprentice

The Parent Report PLDs define briefly what students at each grade and performance level should know and be able to do in relation to the Michigan science curriculum framework.

In September 2005, groups of Michigan educators were brought together to develop more detailed PLDs based on the PLDs presented in this document. The more detailed PLDs were used for standard setting that took place in January 2006, and are available as "Standard Setting PLDs" in the same location as this document.

The Science MEAP was given in the Fall in grades 5 and 8, and measured the science knowledge and skills expected at the end of grades 4 and 7.

Grade 5 Parent Report Performance Level Descriptors

During the elementary school grades, students observed and explored the science of living things, the physical world around them, and the elements and processes that make up and affect Earth.

Students began to use inquiry skills to construct new scientific knowledge to make sense of their observable world. They used their senses to test predictions that answer questions. Students reflected on scientific knowledge to decide whether evidence supports decisions that may affect their lives.

A STUDENT WHO **EXCEEDED** STANDARDS:
Designed investigations to explain real-world events and demonstrated deep connected knowledge of the life, Earth, and physical science concepts presented in the Michigan Science Curriculum Framework for elementary school.
(see www.michigan.gov/documents/Updated_Science_Benchmarks_27030_7.pdf)

A STUDENT WHO **MET** STANDARDS:
Generated questions based on observation, followed investigative procedures, and had the knowledge of the life, Earth, and physical science concepts presented in the Michigan Science Curriculum Framework for elementary school.
(see www.michigan.gov/documents/Updated_Science_Benchmarks_27030_7.pdf)

A STUDENT WHO PERFORMED AT THE **BASIC** LEVEL:
Followed investigative procedures with some difficulty and demonstrated some isolated knowledge of the life, Earth, and physical science concepts presented in the Michigan Science Curriculum Framework for elementary school.
(see www.michigan.gov/documents/Updated_Science_Benchmarks_27030_7.pdf)

A STUDENT WHO PERFORMED AT THE **APPRENTICE** LEVEL:
Followed investigative procedures with great difficulty and had very little knowledge of the life, Earth, and physical science concepts presented in the Michigan Science Curriculum Framework for elementary school.
(see www.michigan.gov/documents/Updated_Science_Benchmarks_27030_7.pdf)

Grade 8 Parent Report Performance Level Descriptors

During the middle school grades, students made connections, explained and applied knowledge relating to the science of living things, the physical world around them, and the elements and processes that make up and affect Earth.

Students constructed new scientific knowledge by applying inquiry skills to test hypotheses about the natural world. They developed explanations by collecting, representing and analyzing data from investigations they designed and conducted. Students reflected on scientific knowledge by evaluating the quality of evidence used to support decisions about their lives and their community.

A STUDENT WHO **EXCEEDED** STANDARDS:
Designed and critiqued scientific investigations, applied knowledge to real-world or future events, and had a deep knowledge and understanding of the life, Earth, and physical science concepts presented in the Michigan Science Curriculum Framework for middle school.
(see www.michigan.gov/documents/Updated_Science_Benchmarks_27030_7.pdf)

A STUDENT WHO **MET** STANDARDS:
Generated questions, designed and conducted scientific investigations, drew conclusions based on evidence, and had a knowledge and understanding of the life, Earth, and physical science concepts presented in the Michigan Science Curriculum Framework for middle school.
(see www.michigan.gov/documents/Updated_Science_Benchmarks_27030_7.pdf)

A STUDENT WHO PERFORMED AT THE **BASIC** LEVEL:
Followed and contributed to scientific investigations based on observations and had a basic knowledge of the separate branches of life, Earth, and physical science concepts presented in the Michigan Science Curriculum Framework for middle school.
(see www.michigan.gov/documents/Updated_Science_Benchmarks_27030_7.pdf)

A STUDENT WHO PERFORMED AT THE **APPRENTICE** LEVEL:
Had only minimal knowledge, skills, and attitudes of the science concepts presented in the Michigan Science Curriculum Framework for middle school.
(see www.michigan.gov/documents/Updated_Science_Benchmarks_27030_7.pdf)